

wherein the second section of said two sections interfaces with a fixed takeaway conveyor,
and,

wherein the second section of said two sections is allowed to articulate and maintain a
physical interface between the first conveyor section and the fixed takeaway conveyor;

an image/ sensor to identify and locate said package in said container; and
a computer to control and process said robotic manipulator , said articulating belt said
conveyor system and said image/ sensor.

Claim 2. (currently amended) The robotic package loading system as described in claim 1,
wherein said conveying means system is an articulating belt a belt conveyor..

Claim 3. (currently amended) The robotic package unloading system as described in claim 1,
wherein said conveying means- system is a slide.

-Claim 4. (currently amended) The robotic package unloading system as described in claim 1,
further comprising:

a carriage for mounting said robotic manipulator and a section of said conveying system;
a carriage lift frame along which the carriage can move up and down; and
a lift mechanism to position said carriage at a correct height for unloading said package,
wherein the robot can reach the packages and the conveying system is positioned to engage the
bottom of the package and help carry the container.

Claim 5. (original) The robotic package unloading system as described in claim 1, wherein said
container is selected from the group consisting of a pallet, a bin and a case.

Claim 6. (canceled) The robotic package unloading system as described in claim 1, wherein
said package is selected from the group consisting of uniform and non-uniform and non-structured
bulk.

Claim 7. (original)The robotic package unloading system as described in claim 1, further
comprising a safety enclosure to protect surrounding personnel.

Claim 8.(currently amended) The robotic package unloading system as described in claim 1,
wherein said computer is used to process an algorithm to interpret the image sensor data and
determine the location of packages for unloading.

Claim 9.(original) The robotic package unloading system as described in claim 8, wherein the
computer provides the robot manipulator with position and path data so that the robot manipulator
grips the package with a variety of preprogrammed strategies.

[Claim 10. (currently amended) A method of unloading ~~uniform as well as non-uniform and non-structured bulk packages from a container~~ bulk packages selected from the group consisting of: uniformly shaped packages that have been stacked in a uniform pattern, uniformly shaped packages that have been stacked in a random pattern, different shaped packages that have been stacked in a uniform pattern, and different shaped packages that have been stacked in a random pattern, comprising the steps of:

holding a more than one package in a container;
positioning a carriage with robot manipulator relative to the position of the package;
gripping said package with a robotic manipulator having an end-of-arm tool;
moving said package with a short takeaway conveyor belt onto said onto a moving carriage;
connecting said moving carriage with said takeaway belt to a fixed conveyor with an articulating conveyor section;
identifying and locating said package in said container with an image sensor; and
controlling and processing said robotic manipulator, said lift mechanism moving carriage and said image sensor with a computer.

Claim 11.(canceled) The method of unloading as described in claim 10, further comprising after the step of gripping the steps of:

~~mounting said robotic manipulator in a moving carriage frame so that the robotic manipulator can move up and down; and~~
~~lifting said carriage to position said carriage at a correct height for unloading said package with a lift mechanism.~~

[Claim] 12.(currently amended) The method of unloading as described in claim 10, wherein said package is pulled outwards until the package makes contact with the takeaway conveying belt, and once the package makes contact with the a takeaway belt of the moving carriage, the robot manipulator releases the package and let the package be carried away to the articulating belt conveyor, which in turn carries the package to the fixed takeaway conveyor.

[Claim 13. (canceled) The method of unloading as described in claim 11, further comprising a step of lowering said carriage after completing unloading all packages on a single layer until new packages are sensed by said image sensor.

Claim 14. (canceled) The method of unloading as described in claim 13, further comprising a step of repeating said steps until all layers of the container are unloaded and the container is

empty.

Claim 15. (canceled) The method of unloading as described in claim 13, further comprising a step of positioning a new container by an operator into positioning for automatic unloading system.

Claim 16 (new) The robotic package unloading system as described in claim 1, wherein the container can hold more than one package on a layer which is selected from the group consisting of: uniformly shaped packages that have been stacked in a uniform pattern, uniformly shaped packages that have stacked in a random pattern, different shaped packages that have been stacked in a uniform pattern, and a different shaped packages that have been stacked in a random pattern.

Claim 17 (new) The robotic package unloading system as described in claim 1, wherein said conveying system is a motor roller conveyor.